NEVARC NEWS VK3ANE

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The monthly magazine of the
North East Victoria Amateur Radio Club http://nevarc.org.au/
An Affiliated club of Wireless Institute of Australia
An Affiliated club of Radio Amateur Society of Australia Inc.

Volume No: 09 Issue 6 June 2022

Next Meeting in June
Sunday 12th
Belviour Guides Hall, 6 Silva Drive West Wodonga
Meetings start with a 12.00pm BBQ lunch,
Call in Via VK3RWO, 146.975, 123 Hz

Did not see this at the ICOM stand at the Hamfest
Maybe still in production, radios are getting smaller by the day!
Antenna must be a carbon based structure that will resonate with a few people

https://nevarc.org.au/flood-recovery/

With the current state of Floods in Southern Queensland and Northern NSW, the members of the NEVARC have decided that the Club Donate to amateurs in the affected areas.

We have decided on a two pronged approach, being cash assistance straight away and a “Radio Drive” to give them some gear as a second tier approach when they are rebuilding their shacks.

Please, Download the Policy and Procedure Document, pass this to all amateurs, whether they need help, or are willing to help. http://nevarc.org.au/wp-content/uploads/2022/03/Flood-policy.pdf

If you are in need of assistance, please contact us at floodrecovery@nevarc.org.au.

If you would like to donate, send an email to contact@nevarc.org.au.

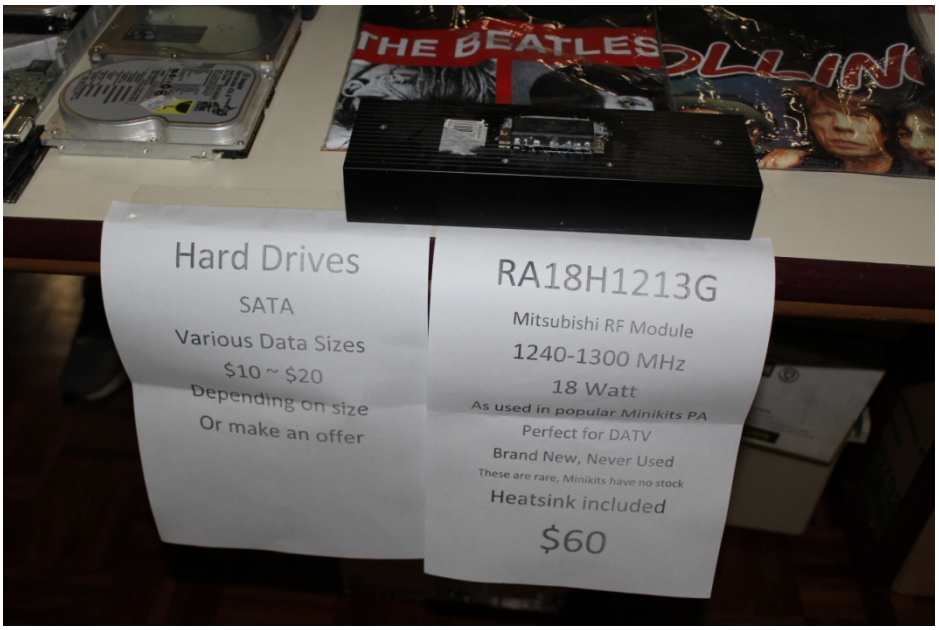
If you have equipment you can spare, let us know at radiodrive@nevarc.org.au.

Moorabbin Hamfest 2022 Review

I don't know if it's my imagination but it seems a long time since I have been to a Hamfest
The EMDRC Hamfest normally held in March was cancelled this year.
Rosebud Hamfest got put forward a whole year as well.
The Moorabbin Hamfest I think is the first one in Melbourne for this year.

As always, finding stuff that I don't want, but that others may, is becoming more of a challenge, as I have sold most of the good stuff over the years, with only the dregs remaining.
But some computer stuff was found, a collection of hard drives with various size data capacity.
Setting up in the morning is different as everyone is transporting their stuff from their cars to the tables via the industrial grade goods lift. The old lift is slow and clunky; the queue grows as the start time nears, arrive early and avoid the rush.

Micks table of stuff for sale, some of it is even ham gear



All my good low priced stuff was sold within minutes of the doors opening

All the other usual stuff was for sale. Crowd numbers seemed a bit lower that usual, but I did not get a lot of time to wander around once the doors were opened. The RASA stand was right next to mine.
I saw two lots of tables vacant that are pre-paid for so maybe the vendors got COVID just before the event?


WIA
The Radio Amateur
of Australia


ADVENTURE

The ICOM table

RASA Stand


Vintage Radio

We eat, no matter what…

Joe & Julies Amateur Radio Club Network

Club Secretary Frank VK2BFC dropped by my table

Franks comments on the Hamfest were;
"I was quite disappointed with the quality of equipment and the amount of it. There were very few radios as such, quite a lot of parts that were clearly dragged out from garages and dusted off. I was most surprised that only 1 retailer was there, selling antennas. And that the WIA decided not to attend yet RASA did. All in all a very disappointing Hamfest, but I did find a good rotator and a nice MFJ Antenna analyser. So the day wasn't a complete loss"

For me the day was worthwhile, you would not retire on the profits but it will go 15% towards a new computer. The existing house computer at 12 years of age is, like me, due for replacement.

~Mick VK3CH

Evolution of Hard Disk Drives

It took 51 years before hard disk drives reached the size of 1TB (terabyte, i.e. 1,000GB). This happened in 2007. In 2009, the first hard drive with 2 TB of storage arrived. So while it took 51 years to reach the first terabyte, it took just two years to reach the second.

Fast forward 10 years, and in 2019 the largest commercially available HDDs store at least 15TB of data. The world of SSDs offered even more space of at least 100TB.

The first hard disk drive, like so many innovations in computing, came from IBM. It was called the IBM Model 350 Disk File and was a huge device. It had 50 24-inch disks contained inside a cabinet that was as large as a cupboard and anything but lightweight. This hulk of a storage unit could store a whopping 5MB of data.

← An IBM Model 350 Disk File being delivered.
Yes, that's ONE hard disk drive unit.

Although hard disk drives kept improving, state-of-the art disks were built according to the concept "bigger is better" well into the '80s. Hard disk drives were normally used together with big mainframe computers, so this wasn't such a big deal. Entire rooms were already set aside for the computers.

IBM introduced the first hard disk drive to break the 1GB barrier in 1980. It was called the IBM 3380 and could store 2.52GB ("2.52 billion characters of information," according to IBM). Its cabinet was about the size of a refrigerator and the whole thing weighed in at 550 pounds (250 kg). It gave users rapid access to a large amount of data, thanks to transferring information at three million characters per second.

Early in the '80s, after the first microcomputer Altair 8800, smaller "consumer" hard disk drives designed to be used with the increasingly popular personal computers (now known as PCs) started to appear. The earliest drives installed in these machines, available since 1980, were 5MB in size and had a form factor of 5.25 inches (Seagate ST506).

← For a visual on how hard disk drive sizes have changed since the '80s until today, have a look at the image with an old 8-inch drive all the way down to today's 3.5-inch, 2.5-inch, and 1.8-inch drives.

The first hard disk drive (RAMAC 305 produced by IBM) back in 1956 could store 5MB of data, which was a huge amount at the time. This is coincidentally also the size of the first "small" 5.25-inch hard disk drive that arrived in 1980. We went from needing a special room for the hard disk drive and its computer, to having one we could fit inside a desktop computer. Ten years later, in 1990, a "normal" hard drive (like the ones produced by Maxtor) held about 40MB, with more expensive options able to store more than 100MB.

Fast forward to present day, and you can buy a 3.5-inch hard disk drive with 15TB of storage space.

Changes in Price over Time

As with any rare commodity, early hard drives were extremely expensive and used with equally huge and expensive mainframe computers.

The first hard disk drive, the IBM Model 350 Disk File we mentioned above, wasn't something you got as a stand-alone unit. It wasn't even something you bought. Instead you could lease the IBM 305 RAMAC computer that came with the 350 Disk File for $3,200 per month. Back in '50s this was a lot more money than it is now.

The biggest and best hard disk drives kept being an expensive proposition. When it finally started selling in 1981 after some initial delivery hiccups, the price for the 2.52GB refrigerator-sized IBM 3380 started at $81,000. And then you of course needed a computer to use it with.

The first 5.25-inch 5MB hard disk drives (i.e. the consumer option) in the '80s cost well over $3,000. Similar prices remained for the 10MB drives that soon replaced them. This probably explains why most PCs were initially sold without a hard disk drive, instead relying on floppy disk drives.

As storage space has increased, it has also become infinitely more affordable. The average cost per gigabyte has, over the last 30 years, gone from way over $100,000 to just a few cents. Now that's inflation…

Factoid: A 5MB hard disk drive from Apple cost $3,500 in 1981. That's $700,000 per gigabyte.

Nowadays, we will pay around $18 for 1TB of hard disk space.

And of course, 38 years ago, TB of storage was unheard of.

Another 30 Years into the Future

Considering we now have tiny, cheap USB sticks that can easily hold 256GB of data (and expensive ones— 1TB or more), which is about 6,500 times more than a normal hard disk drive in 1990 (40MB), we can say that things have certainly moved forward. And just like we are now looking back and shaking our heads at the amazing difference between now and a few decades ago, we may look back at 2022 and shake our heads with similar amazement. "Was storage really that primitive back then?"

As technology races forward, new and better things have emerged on the market. While hard drives still retain a lot of relevance in today's data storage landscape, promising new contenders are eating up more and more of the market share.

The biggest challenger to the hard drive is the solid state drive. These drives can be costly, but are much faster than hard drives in terms of access time and read and write speeds. While not completely new to the market, solid state drives, or SSDs, are making a bigger and bigger impact on the data storage landscape. Rather than using spinning disks with moving read-write heads like a hard disk drive does, solid state drives have no moving parts.

Instead, SSDs use semiconductor cells, usually in the form of what's called NAND flash memory. These cells use electrical charges to store information or — in the case of some newer designs — the cells have their resistance changed rather than their charge.

Because of this design, the solid state drive can effectively read and write from any location with almost no latency compared to a hard disk, which needs to rotate the platter to locate the data and bring the read-write heads into position.

~Internet

What Is a Transmission Line?

High-frequency interconnects require special consideration because they often behave not as ordinary wires but rather as transmission lines.

In low-frequency systems, components are connected by wires or PCB traces. The resistance of these conductive elements is low enough to be negligible in most situations.

This aspect of circuit design and analysis changes dramatically as frequency increases. RF signals do not travel along wires or PCB traces in the straightforward fashion that we expect based on our experience with low-frequency circuits.

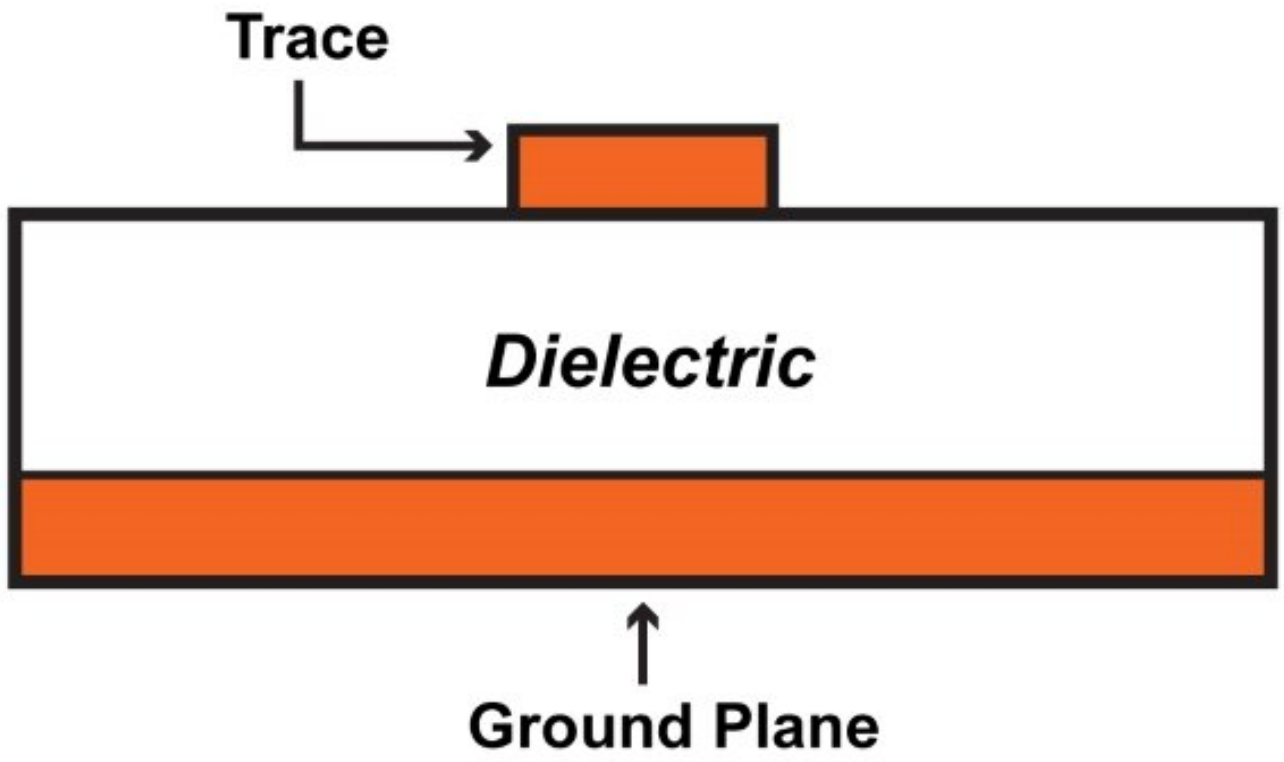
The Transmission Line

The behaviour of RF interconnects is very different from that of ordinary wires carrying low-frequency signals—so different, in fact, that additional terminology is used: a *transmission line* is a cable (or simply a pair of conductors) that must be analyzed according to the characteristics of high-frequency signal propagation.

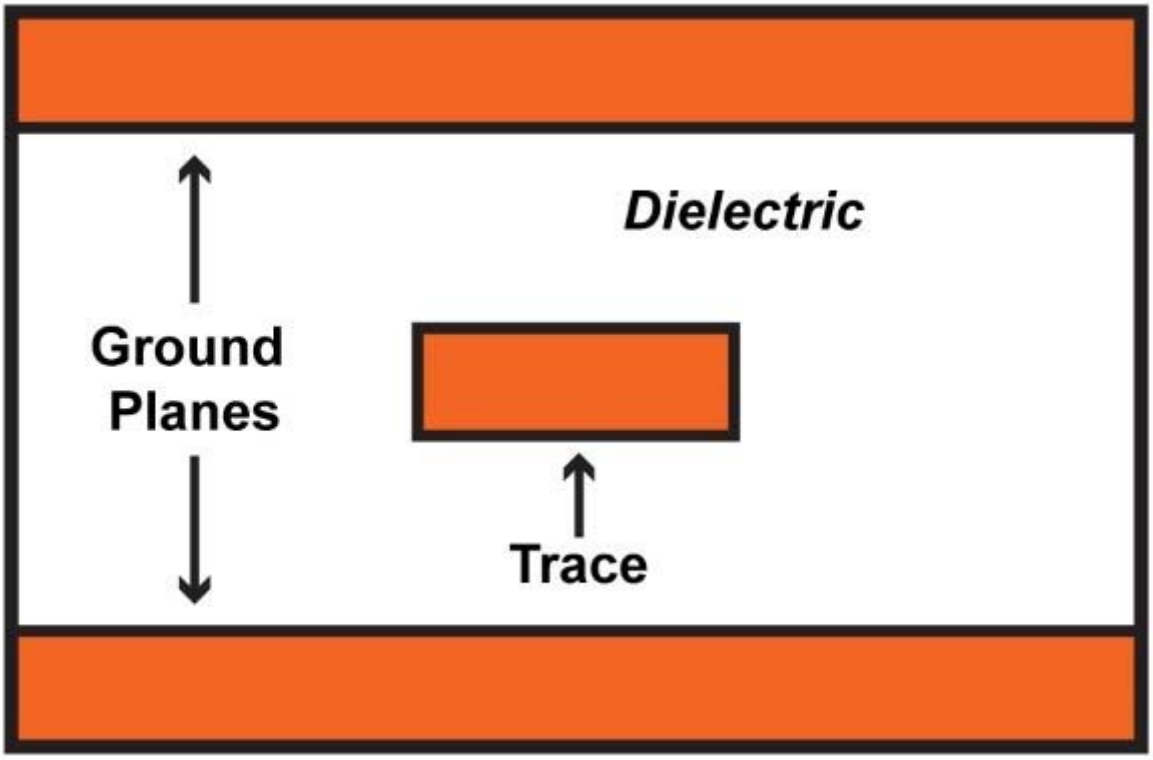
First, let's clarify two things:

Cable vs. Trace

"Cable" is a convenient but imprecise word in this context. The coaxial cable is certainly a classic example of a transmission line, but PCB traces also function as transmission lines. The "microstrip" transmission line consists of a trace and a nearby ground plane, as follows:



The "stripline" transmission line consists of a PCB trace and two ground planes:



PCB transmission lines are particularly important because their characteristics are controlled directly by the designer. When we buy a cable, its physical properties are fixed; we simply gather the necessary information from the datasheet. When laying out an RF PCB, we can easily customize the dimensions—and thus the electrical characteristics—of the transmission line according to the needs of the application.

The Transmission Line Criterion

Not every high-frequency interconnect is a transmission line; this term refers primarily to the electrical interaction between signal and cable, not to the frequency of the signal or the physical characteristics of the cable. So when do we need to incorporate transmission-line effects into our analysis?

The general idea is that transmission-line effects become significant when the length of the line is comparable to or greater than the wavelength of the signal. A more specific guideline is one-fourth of the wavelength:

- If the interconnect length is less than one-fourth of the signal wavelength, transmission-line analysis is not necessary. The interconnect itself does not significantly affect the electrical behavior of the circuit.
- If the interconnect length is greater than one-fourth of the signal wavelength, transmission-line effects become significant, and the influence of the interconnect itself must be taken into account.

Recall that wavelength is equal to propagation velocity divided by frequency:

$$\lambda = v \quad f \quad \lambda=vf$$

If we assume a propagation velocity of 0.7 times the speed of light, we have the following wavelengths:

1 kHz	210 km
1 MHz	210 m
1 GHz	210 mm
10 GHz	21 mm

The corresponding transmission-line thresholds are the following:

1 kHz	52.5 km
1 MHz	52.5 m
1 GHz	52.5 mm
10 GHz	5.25 mm

So for very low frequencies, transmission-line effects are negligible. For medium frequencies, only very long cables require special consideration. However, at 1 GHz many PCB traces must be treated as transmission lines, and as frequencies climb into the tens of gigahertz, transmission lines become ubiquitous.

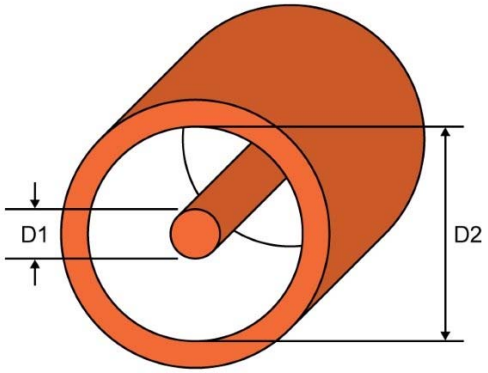
Characteristic Impedance

The most important property of a transmission line is the characteristic impedance (denoted by Z_0). Overall this is a fairly straightforward concept, but initially it can cause confusion.

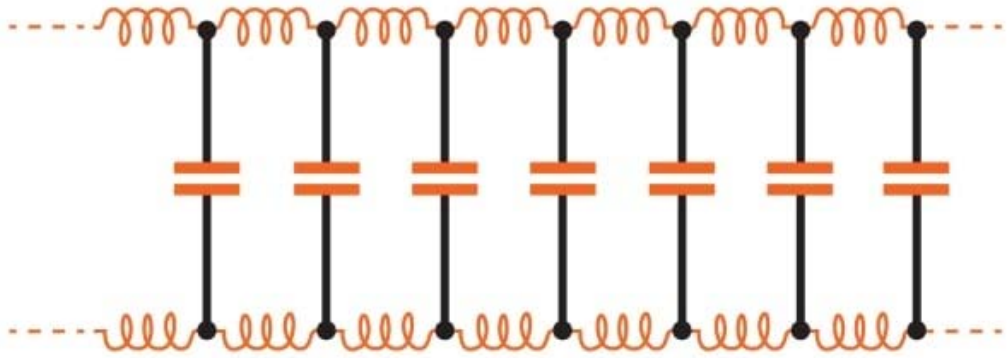
First, a note on terminology: "Resistance" refers to opposition to any flow of current; it is not dependent on frequency. "Impedance" is used in the context of AC circuits and often refers to a frequency-dependent resistance. However, we sometimes use "impedance" where "resistance" would theoretically be more appropriate; for example, we might refer to the "output impedance" of purely resistive circuit.

Thus, it's important to have a clear idea of what we mean by "characteristic impedance." It is not the resistance of the signal conductor inside the cable—a common characteristic impedance is 50 Ω, and a DC resistance of 50 Ω for a short cable would be absurdly high. Here are some salient points that help to clarify the nature of characteristic impedance:

- Characteristic impedance is determined by the physical properties of the transmission line; in the case of a coaxial cable, it is a function of the inner diameter (D1 in the diagram below), the outer diameter (D2), and the relative permittivity of the insulation between the inner and outer conductors.



- Characteristic impedance is not a function of cable length. It is present everywhere along the cable, because it results from the cable's inherent capacitance and inductance.



In this diagram, individual inductors and capacitors are used to represent the distributed capacitance and inductance that is continuously present throughout the length of the cable.

- In practice, a transmission line's impedance is not relevant at DC, but a theoretical transmission line of infinite length would present its characteristic impedance even to a DC source such as a battery. This is the case because the infinitely long transmission line would perpetually draw current in an attempt to charge up its infinite supply of distributed capacitance, and the ratio of the battery voltage to the charging current would be equal to the characteristic impedance.
- The characteristic impedance of a transmission line is purely resistive; no phase shift is introduced, and all signal frequencies propagate at the same speed. Theoretically this is true only for *lossless* transmission lines—i.e., transmission lines that have zero resistance along the conductors and infinite resistance between the conductors. Obviously such lines do not exist, but lossless-line analysis is sufficiently accurate when applied to real-life low-loss transmission lines.

Reflections and Matching

The impedance of a transmission line is not intended to restrict current flow in the way that an ordinary resistor would. Characteristic impedance is simply an unavoidable result of the interaction between a cable composed of two conductors in close proximity. The importance of characteristic impedance in the context of RF design lies in the fact that the designer must match impedances in order to prevent reflections and achieve maximum power transfer.

Summary

- An interconnect is considered a transmission line when its length is at least one-fourth of the signal wavelength.
- Coaxial cables are commonly used as transmission lines, though PCB traces also serve this purpose. Two standard PCB transmission lines are the microstrip and the stripline.
- PCB interconnects are typically short, and consequently they do not exhibit transmission-line behavior until signal frequencies approach 1 GHz.
- The ratio of voltage to current in a transmission line is referred to as the characteristic impedance. It is a function of the physical properties of the cable, though it is not affected by length, and for idealized (i.e., lossless) lines it is purely resistive.

~Internet

Scientists hope to broadcast DNA and Earth's location for curious aliens

Beacon of Galaxy message could be sent into heart of Milky Way, where life is deemed most likely to exist.

"Even if the aliens are short, dour and sexually obsessed," the late cosmologist Carl Sagan once mused, "if they're here, I want to know about them."

Driven by the same mindset, a Nasa-led team of international scientists has developed a new message that it proposes to beam across the galaxy in the hope of making first contact with intelligent extraterrestrials.

The interstellar missive, known as the Beacon in the Galaxy, opens with simple principles for communication, some basic concepts in maths and physics, the constituents of DNA, and closes with information about humans, the Earth, and a return address should any distant recipients be minded to reply.

The group of researchers, headed by Dr Jonathan Jiang at Nasa's Jet Propulsion Laboratory in California, says that with technical upgrades the binary message could be broadcast into the heart of the Milky Way by the Seti Institute's Allen Telescope Array in California and the 500-metre Aperture Spherical Radio Telescope in China.

In a preliminary paper, which has not been peer reviewed, the scientists recommend sending the message to a dense ring of stars near the centre of the Milky Way – a region deemed most promising for life to have emerged. “Humanity has, we contend, a compelling story to share and the desire to know of others – and now has the means to do so,” the scientists write.

The message, if it ever leaves Earth, would not be the first. The Beacon in the Galaxy is loosely based on the Arecibo message sent in 1974 from an observatory of the same name in Puerto Rico. That targeted a cluster of stars about 25,000 light years away, so it will not arrive any time soon. Since then, a host of messages have been beamed into the heavens including an advert for Doritos and an invitation, written in Klingon, to a Klingon Opera in The Hague.

Such attempts at interstellar communication are not straightforward. The odds of an intelligent civilisation intercepting a message may be extremely low, and even if contact were made, establishing a fruitful conversation could prove frustrating when a response can take tens of thousands of years. Aliens may not even understand the signal: as a test run for the Arecibo message, Frank Drake, its designer, posted the missive to some scientific colleagues, including a number of Nobel laureates. None of them understood it.

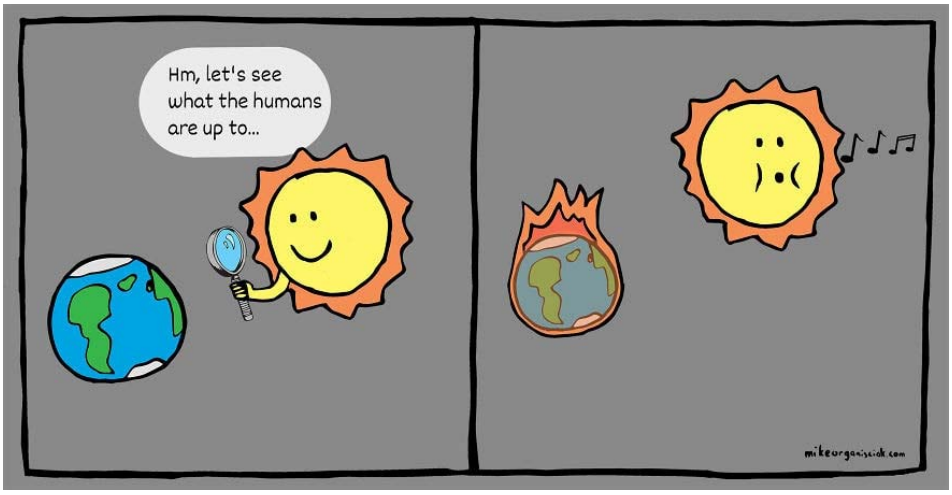
There are other concerns, too. More than a decade ago, Prof Stephen Hawking warned that humans should refrain from sending messages into space in case they attract the wrong sort of attention. “If aliens visit us, the outcome would be much as when Columbus landed in America, which didn’t turn out well for the Native Americans,” he told a Discovery channel documentary.

But Dr Jiang and his colleagues argue that an alien species capable of communication across the cosmos may well have learned the value of peace and collaboration, and humanity could have much to learn from them. “We believe the advancements of science that can be achieved in pursuit of this task, if communication were to be established, would vastly outweigh the concerns,” they write.

Dr Anders Sandberg, a senior research fellow at the Future of Humanity Institute at the University of Oxford, said: “My view is that the overall risk and benefit of sending messages are both small; it is better and safer for us to move out into space and hopefully, eventually, find neighbours when we are both adult species.”

But he said it was worthwhile to think over how we may communicate with aliens. “I think it is something we should regard as training for learning to coordinate better as a species,” he added.

~Internet



A pizza parlour has a choice of 12 toppings for its pizzas. From these 12 toppings, how many different 4-topping pizzas can be ordered? Assume that the order in which the toppings are listed does not matter.
Answer: 12C4 = [12*11*10*9]/[1*2*3*4] = 495

DTMF DECODE ROUTINES VK3RTV1 AND VK3RTV2

USER CODES

*** TT0.TT0 # = $AA Colour Bar**
*** TT0.TT1 # = $1A SMPTE**
*** TT0.TT2 # = $2A SMPTE MULTI**
*** TT0.TT3 # = $3A VK3RTV Information**
*** TT0.TT5 # = $5A Video Feature**
*** TT0.TT6 # = $6A OVU Left Hand Tone**

SIGNAL REPORTS

*** TT3.TT0 # = $A3 1246 DVB-S/S2**
*** TT3,TT1 # = $13 1255 DVB-S/S2**
*** TT3.TT2 # = $22 1278 DVB-S/S2**
*** TT3.TT3 # = $33 1287 DVB-S/S2**

*** TT3.TT5 # = $53 1246 DVB-T**
*** TT3.TT6 # = $63 1255 DVB-T**
*** TT3.TT7 # = $73 1278 DVB-T**

*** TT4 # is used for User Reset**

From May, these are the new DTMF Codes for VK3RTV.

Peter Cossins completed the installation of the new Media Player which was a reasonably big change. VK3RTV now has RS232 control and almost instantaneous selection of tracks.

New is a feature video, this time on 4K with others to follow.

If you have some good clips then these can be used in the future.

The signal reports are a work in progress and not yet available.

Peter is in the process of building a special rack installation for this purpose, all in the one place.

On the face of it you will not see any difference with the video except for the speed of and accuracy of track selection. The Power Supply and the Media Player have also been reinstalled.

~Peter VK3BFG

We are conducting tests to provide a DVB-T option input to VK3RTV. At present we have successfully tested a Multi-Coupler that enables multiple receivers on the one antenna. A DVB-T Exciter can be achieved used Hides Transmitters such as the HC 320. Alternatively a Broadcast Band DVB-T Exciter can be used with an Up Converter to 23 cms. This latter option is potentially a cheaper way to go.

The number of stations active now in Melbourne is certainly the biggest group in Australia and perhaps even in the world for a single city. Recently I had an email from Roland KC6JPG who is a well recognised ATV Co-Ordinator in Los Angeles. He commented that Melbourne's DVB-T2 4K Ultra HD ATV system is currently the best in the world. I am not aware of any that has a two channel multiplexer as well although there may be in Europe.

In parallel with DVB-T testing, I have re-visited the signal reporting system and that will be installed soon. Both DVB-S/S2 and DVB-T services will have signal reports on call via DTMF.
Strong Set Top Boxes have been a successful option for receiving VK3RTV. Recently I tried to program three new Units straight out of the box and purchased from Strong direct. Two of the Units identified VK3RTV1 and VK3RTV2, but selecting VK3RTV2 the picture froze in a few seconds. VK3RTV ran quite OK. The third unit froze up on both Vk3RTV1 and VK3RTV2. In all cases the picture came up initially and the receivers reported reception of a new signal. These units were SRT 5437. Previous units of this model worked fine. I will advise if I hear any resolution to the problem which may be a Firmware issue. There is now other Set Top Boxes DVB-T2 compliant that buyers can consider.

If no signals are received for an hour VK3RTV will come on with callsign for about 20 minutes in a 'Beacon Mode'. This will assist in tuning Set Top Boxes as well as keeping the system busy.
Remember there is a ATV Net every Tuesday night at 8 PM with VK3RTV Updates and general station participation. Net Control is usually Neil VK3BCU but with guest Controllers from time to time. The WIA Broadcast is on VK3RTV at 10.30AM and 8 PM Sunday and Friday night is the Astronomical Society of Victoria at about 10 PM. VK3RTV is streaming via the BATC and the net can also be seen on VK3QL's U Tube Channel.

DTMF Operations for VK3RTV

The DTMF call on various functions operates with priority override to inbound ATV signals. ie if there is an ATV Signal present it will take priority and break in. If you call a function you then need to drop your carrier straight away. The function will then time out or be interrupted by an inbound ATV signal. TT4 is also a reset signal, but if I implemented that a station without DTMF would have to wait for time out.

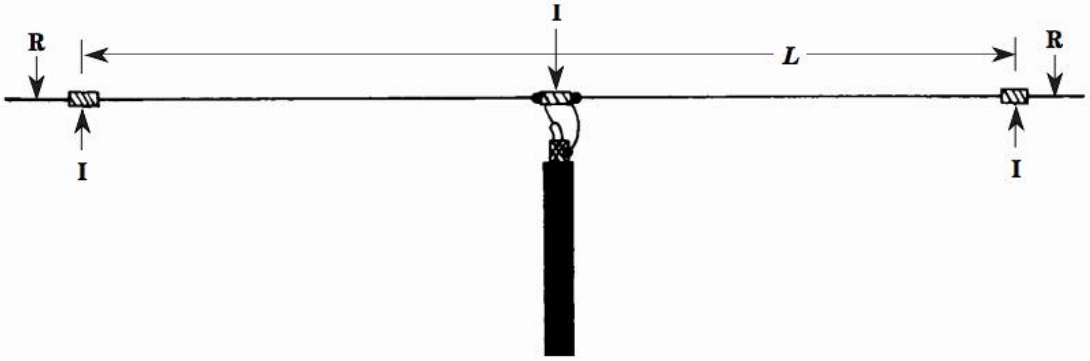
The only exception is the 0 VU tone. It will run for 2 minutes, no break in. Currently station audio is a bit all over the place, note the 0 VU tone and then establish your audio level against it. The Information file which is encoded by VK3YLH runs very close to 0VU so that is another option for establishing the correct audio level.
I have a proposal on the table with Amateur Radio Victoria for a South East Beam. This would complete the metropolitan coverage with overlap and also bring in potential stations from the Geelong area. The main cost is a half day's work for a professional Rigger.

Set Top Box Receivers – DVB-T2

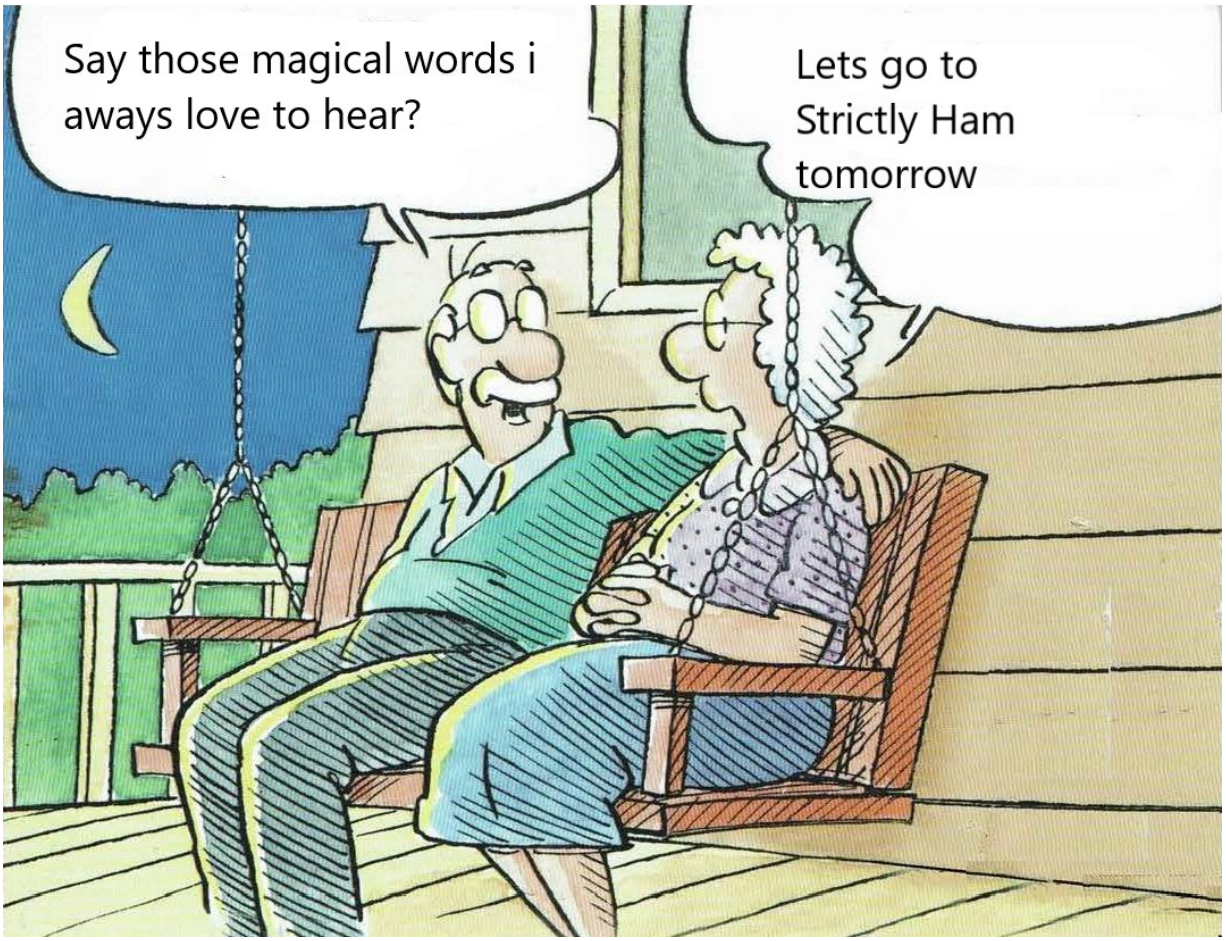
1. Strong SR5434 (patch on website.) 2. MagicSee C300 3. Vmade C5 HD Combo T2/S2
4. GT Media V7 Plus DVB-S2/T2 Combo Set Top Box - Model P51STC 5. Dynalink A2809A
6. Strong SRT 5437 Auto tunes VK3RTV 7. Hello Box 8 (DVB/S2 + DVB-T2)
8. GT Media V7 Pro DVB/S2X.+ DVB/T2 Auto tunes VK3RTV 9. TCL TV Model: 40S6800FS

~Regards Peter VK3BFG

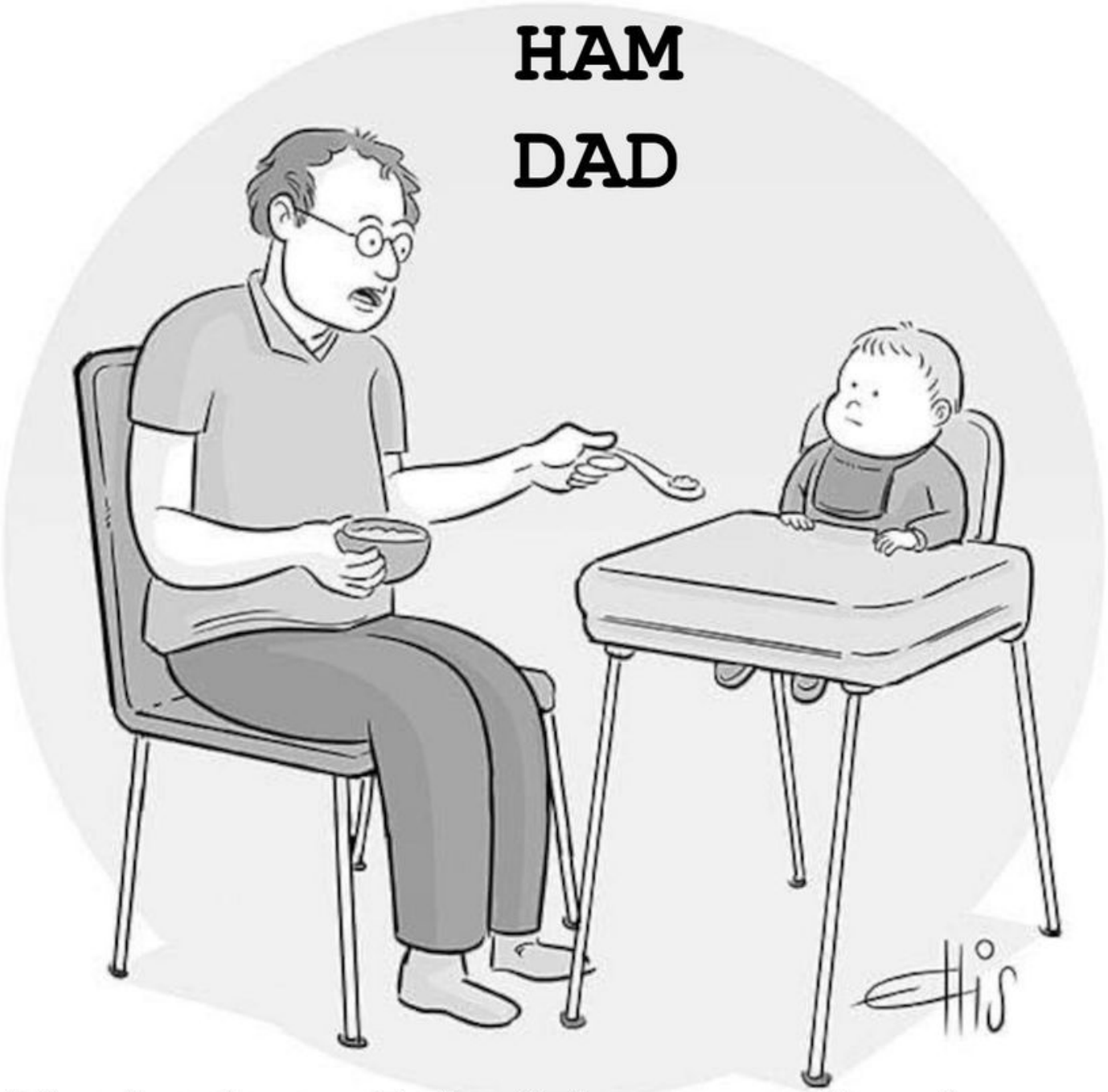
QRP CONTACTS ARE



SUPREME COMPLIMENTS TO THE OTHER HAMS' STATIONS AND SKILLS!

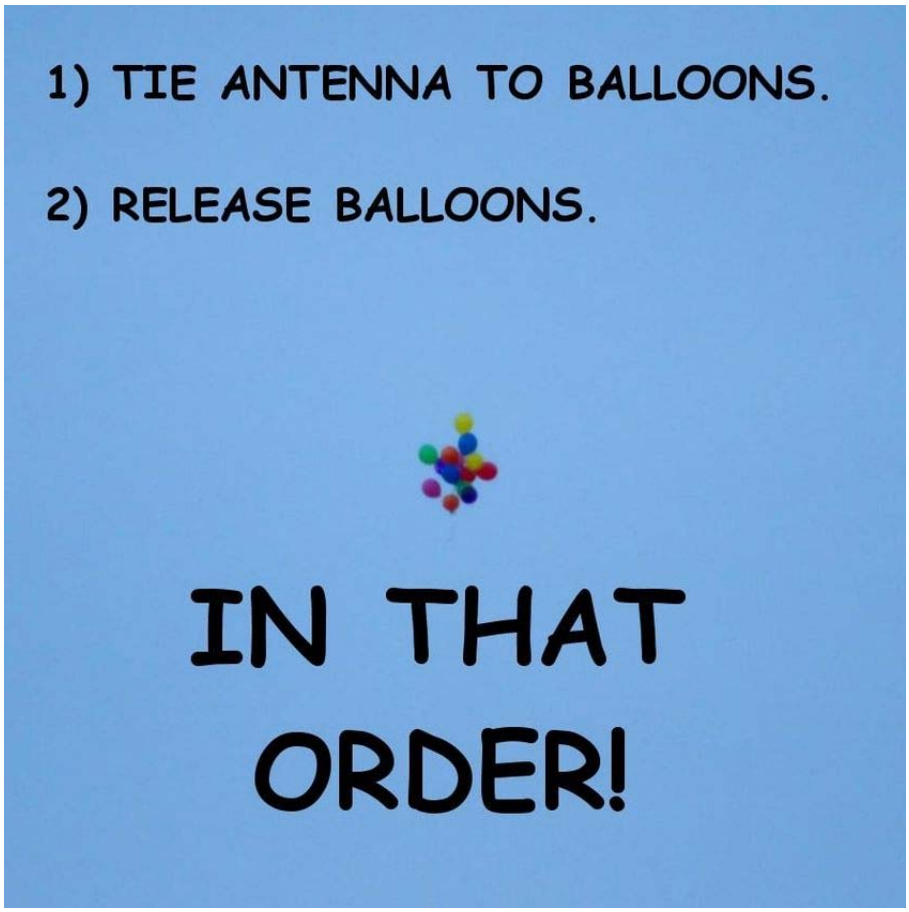


If you make antennas, a 59 signal report will still look less like a bowling score than your golf scores.

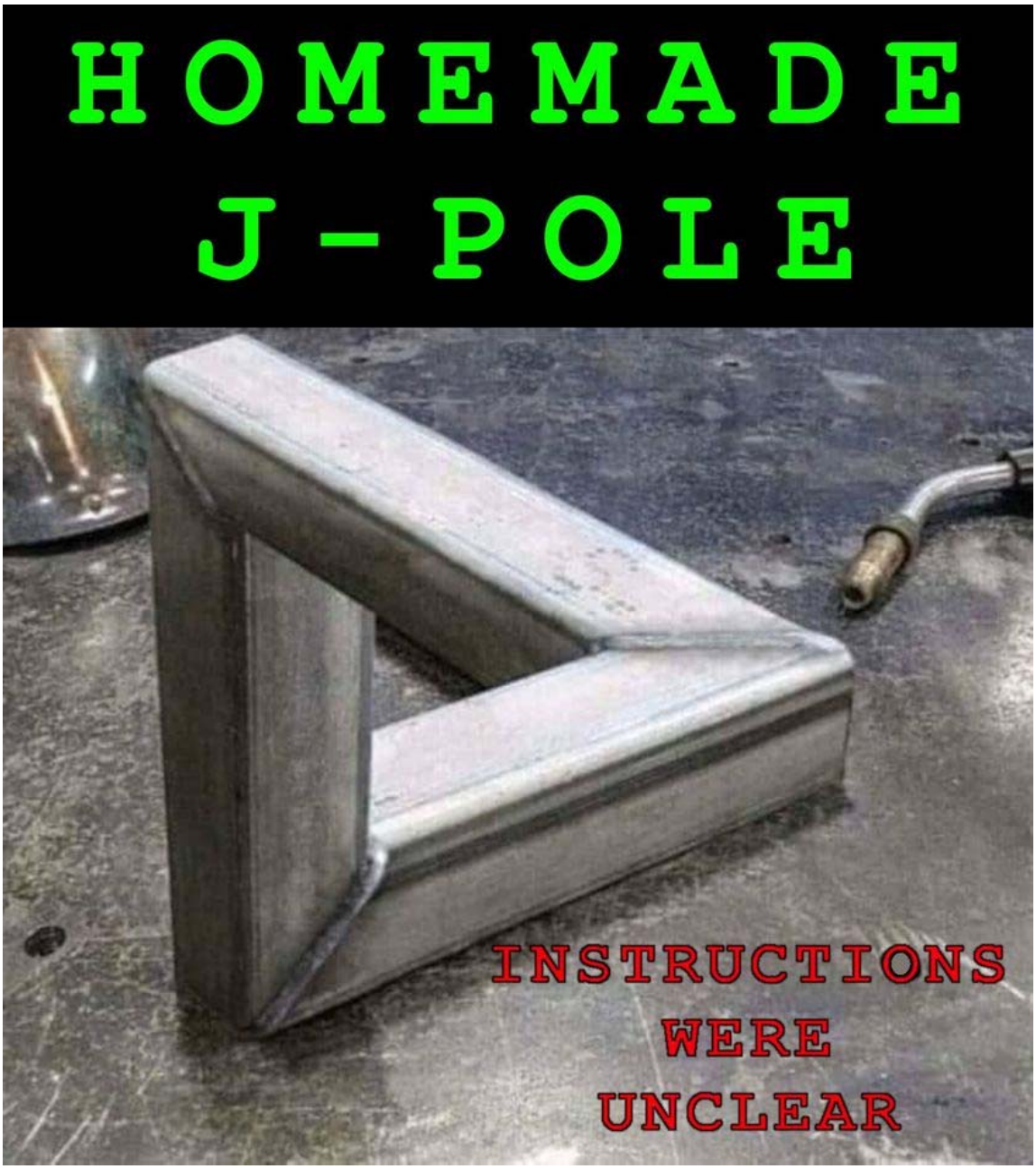

HAM
DAD
"And when I hold your food way over here, we call that 'DX.' Can you say 'DX' ?"


HOW I SPEND MONEY
Groceries
Just the basics.
Household Items
Whichever brands are cheapest.
HAM GEAR

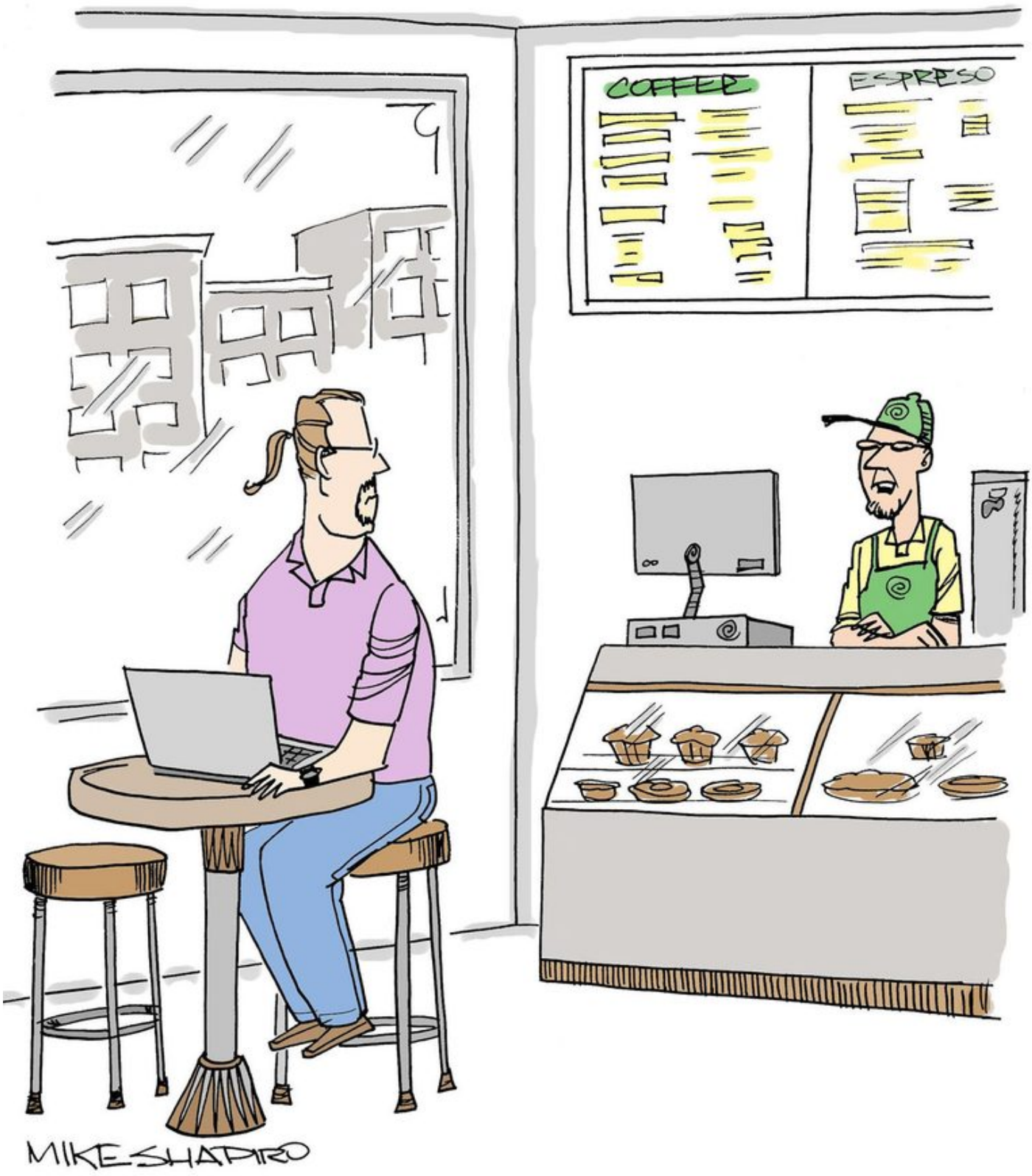

"I thought the bands were open this morning, then I put on my glasses and, well, I had been talking to the coffee maker by mistake."



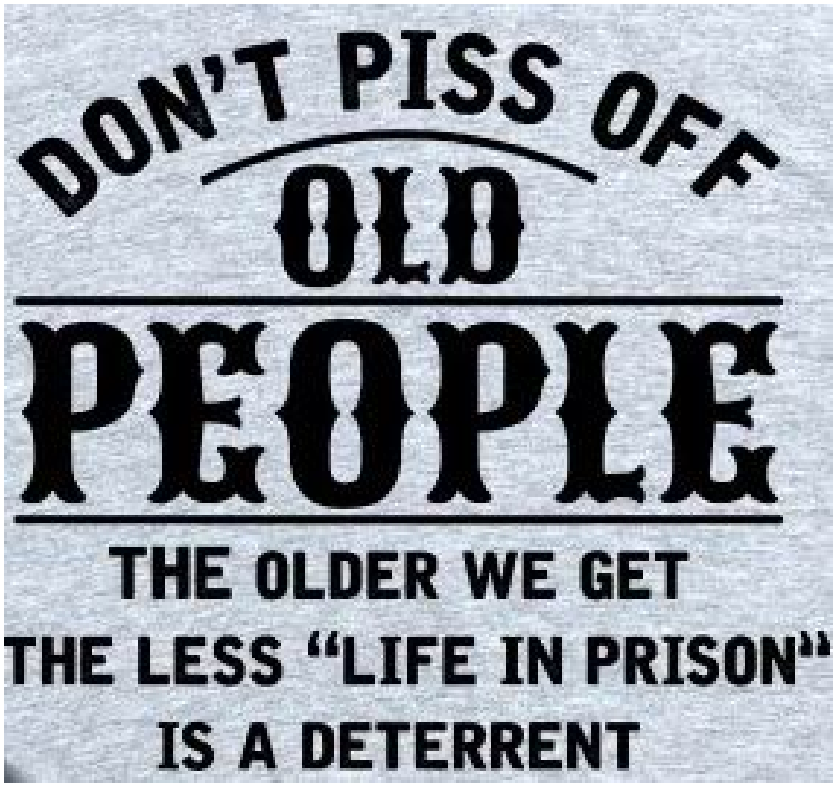
"Your call is important to us. Please hang up the phone and go use your radio. 73"


HOMEMADE
J-POLE
INSTRUCTIONS
WERE
UNCLEAR


I COULDN'T SLEEP LAST NIGHT 'CAUSE MY NEIGHBORS WERE HAVING SEX AGAIN.
mikeorganisciak.com



"The WiFi passsword is:
'buysomethingorgetout'."


DON'T PISS OFF
OLD
PEOPLE
THE OLDER WE GET
THE LESS "LIFE IN PRISON"
IS A DETERRENT


Drugs
Alcohol
Therapy
Ham Radio

"How can I possibly annoy you by disappearing into my radio shack for hours on end?"

"I'm working from home today."

TAX

Tax his land, Tax his bed,

Tax the table, at which he's fed.

Tax his tractor, Tax his mule, Teach him taxes are the rule.

Tax his work, Tax his pay, He works for peanuts anyway!

Tax his cow, Tax his goat, Tax his pants, Tax his coat.

Tax his ties, Tax his shirt, Tax his work,

Tax his dirt.

Tax his tobacco, Tax his drink, Tax him if he tries to think.

Tax his cigars, Tax his beers, If he cries Tax his tears.

Tax his car, Tax his gas, Find other ways to tax his ass.

Tax all he has Then let him know

That you won't be done till he has no dough.

When he screams and hollers; Then tax him some more,

Tax him till He's good and sore.

Then tax his coffin, Tax his grave, Tax the sod in which he's laid...

Put these words upon his tomb, Taxes drove me to my doom...'

When he's gone, do not relax,

It's time to apply the inheritance tax.

Australia Ham Radio 40 Meter Net

7 Days a Week
10am Local time
(East coast)
7.100 MHz LSB

Approximately + or – QRM

Hosted by Ron VK3AHR

NEVARC 2 Meter Net

Net Control VK3ANE

NEVARC Linked Repeaters

VK2RWD, VK3RWO, VK3RWC

Wednesday - 8.00pm
Local time

President, VK3VS, Matt
Vice President, VK2VU, Gary
Secretary, VK2BFC, Frank
Treasurer, Amy Bilston

WIA Affiliated Club

The Radio Amateur Society of Australia

NEVARC
North East Victoria Amateur Radio Club

NEVARC CLUB PROFILE

History

The North East Victoria Amateur Radio Club (NEVARC) formed in 2014.
As of the 7th August 2014, Incorporated, Registered Incorporation number A0061589C.
NEVARC is an affiliated club of the Wireless Institute of Australia and The Radio Amateur Society of Australia Inc.

Meetings

Meetings details are on the club website, the Second Sunday of every month, check for latest scheduled details.
Meetings held at the Belviour Guides Hall, 6 Silva Drive West Wodonga.
Meetings commence with a BBQ (with a donation tin for meat) at 12pm with meeting afterwards.
Members are encouraged to turn up a little earlier for clubroom maintenance.
Call in Via VK3RWO, 146.975, 123 Hz tone.

NEVARC NETS

HF
7.100 MHz 7 Days a Week - 10am Local time

VHF
VK2RWD Wednesday - 8.00pm Local time NEVARC Linked Repeaters: VK2RWD, VK3RWO, VK3RWC

Benefits

To provide the opportunity for Amateur Radio Operators and Short Wave Listeners to enhance their hobby through interaction with other Amateur Radio Operators and Short Wave Listeners. Free technology and related presentations, sponsored construction activities, discounted (and sometimes free) equipment, network of likeminded radio and electronics enthusiasts. Excellent club facilities and environment, ample car parking.

Website: www.nevarc.org.au

Facebook: www.facebook.com/nevicARC/

Postal: **NEVARC Secretary**
PO Box 8006
Birallee Park
Wodonga Vic 3690

All editors' comments and other opinions in submitted articles may not always represent the opinions of the committee or the members of NEVARC, but published in spirit, to promote interest and active discussion on club activities and the promotion of Amateur Radio.
Contributions to NEVARC News are always welcome from members.
Email attachments of Word™, Plain Text, Excel™, PDF™ and JPG are all acceptable.
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Please include a stamped self-addressed envelope if you require your submission notes returned.
Email attachments not to exceed 5 Mb in file size. If you have more than 5 Mb, then send it split, in several emails to us.
Attachments of (or thought to be) executable code or virulently affected emails will not be opened.
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While we strive to be accurate, no responsibility taken for errors, omissions, or other perceived deficiencies, in respect of information contained in technical or other articles.
Any dates, times and locations given for upcoming events please check with a reliable source closer to the event.
This is particularly true for pre-planned outdoor activities affected by adverse weather etc.
The club website http://nevarc.org.au/has current information on planned events and scheduled meeting dates.
You can get the WIA News sent to your inbox each week by simply clicking a link and entering your email address found at www.wia.org.au The links for either text email or MP3 voice files are there as well as Podcasts and Twitter. This WIA service is FREE.